

INTERNATIONAL SEARCH REPORT

PCT/JP2004/011641

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C01B13/20 C01F17/00 C01G45/02 C01F7/16 C01G15/00
C01G23/00 C01G25/00 C01G35/00 C01B35/12 C01B33/20

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C01B C01F C01G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 391 273 B1 (FRIES TORSTEN ET AL) 21 May 2002 (2002-05-21) claims	1-25
X	US 5 075 090 A (LEWIS DUANE J ET AL) 24 December 1991 (1991-12-24) column 3, line 24 - line 65; claims; figure	1-25
X	EP 0 055 459 A (KAMATA KIICHIRO ; RIKUUN ELECTRIC CO (JP)) 7 July 1982 (1982-07-07) cited in the application page 7, line 7 - page 10, line 11; claims; examples	1-25
X	US 5 876 683 A (CHEN YIJIA ET AL) 2 March 1999 (1999-03-02) claims.	1-25
	-/-	



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
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- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *G* document member of the same patent family

Date of the actual completion of the international search

11 November 2004

Date of mailing of the international search report

18/11/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Van der Poel, W

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 842 832 A (INOUE HAKUAI ET AL) 27 June 1989 (1989-06-27) examples 3-24	1-25
X	----- PATENT ABSTRACTS OF JAPAN vol. 008, no. 222 (C-246), 9 October 1984 (1984-10-09) & JP 59 107904 A (NIPPON SODA KK), 22 June 1984 (1984-06-22) cited in the application abstract -----	1-25